

WHAT IS CLAIMED IS:

1. A synchronous induction motor comprising:

a stator provided with a stator winding;

a rotor rotating within said stator;

a cage-type secondary electric conductor provided in a peripheral portion of a rotor yoke portion constituting said rotor; and

a permanent magnet inserted into the rotor yoke portion and having a two-pole structure,

wherein the magnetomotive force generated by one pole of said rotor is set to a value equal to or less than 10 % of a peak value in a predetermined range near an electrical angle 0 degree or 180 degrees.

2. A synchronous induction motor as claimed in claim 1, wherein said range equal to or less than 10 % is set to electrical angles 0-10 degrees and 170-180 degrees.

3. A synchronous induction motor as claimed in claim 1 or 2, wherein the magnetomotive forces generated by said rotor in the other range of the electrical angle than said range equal to or less than 10 % are distributed in a sine wave shape.

4. A synchronous induction motor as claimed in claim 1 or 2, wherein the magnetomotive forces generated by said rotor in the other range of the electrical angle than said range equal to or less than 10 % are distributed in a step-like chevron shape having two steps or more.

5. A synchronous induction motor as claimed in claim 1,

2, 3 or 4, wherein the synchronous induction motor is mounted on a compressor.

6. A synchronous induction motor as claimed in claim 5, wherein the compressor is used in an air conditioning device or an electric refrigerator.